

**REMARKS**

Claims 1-3 remain pending in connection with the present application, with claims 4-12 being cancelled without prejudice or disclaimer of the subject matter contained therein. Claim 1 is the sole remaining independent claim.

**INFORMATION DISCLOSURE STATEMENT**

Applicants note that an Information Disclosure Statement is being filed concurrent with the present Amendment. Consideration of the documents listed in the aforementioned Information Disclosure Statement is respectfully requested.

**DRAWINGS**

The Examiner has alleged that figure 2 should be labeled as "Prior Art". In an effort to expedite prosecution in connection with the present application, figure 2 has been labeled as "Prior Art". Withdrawal of the objection is respectfully requested.

**CLAIM REJECTIONS UNDER 35 U.S.C. § 112**

Claims 1-12 have been rejected under 35 U.S.C. § 112, second paragraph. Although Applicants do not necessarily agree with these rejections, claim 1 of the present application has been amended in an effort to alleviate the minor formalities alleged by the Examiner. Claims 4 and 5 have been cancelled without prejudice or disclaimer of the subject matter

contained therein. Accordingly, withdrawal of the Examiner's rejection is respectfully requested.

**CLAIM REJECTIONS UNDER 35 U.S.C. § 103**

The Examiner has rejected claims 1-3, 5 and 10 under 35 U.S.C. § 103 as being unpatentable over United States Patent No. 6,407,363 to Dunskey (the Dunskey '363 patent) in view of United States Patent No. 6,229,114 to Andrews (the Andrews '114 patent). This rejection is respectfully traversed.

As indicated above, Applicants have cancelled claims 4-12 in connection with the present application. Further, Applicants have amended claim 1 of the present application to clarify its distinctions over the alleged combination of the Dunskey '363 patent and the Andrews '114 patent, even assuming that they could be combined (which Applicants do not admit for reasons which will be set forth hereafter).

Specifically, claim 1 is directed to a method for drilling a hole including performing movement and centering of the laser beam to a drill position using a first deflection unit and "continuously moving a second deflection unit to modulate the laser beam to the circular movement, the second deflection unit being placed in a position preceding the first deflection unit". At least such a feature, of continuously moving a second deflection unit placed in a position preceding the first deflection unit, is not taught or suggested by the references, taken either singly, or in combination.

Initially, with regard to the Dunskey '363 patent, the Examiner raises Applicants attention to figure 21 of the reference. However, both figures 21 and 22 merely involve a type of jumping motion for jumping a laser beam pattern 274 to various new locations. Such a jumping motion is then used to form a type of spiraling formation as shown as the circular spiral of figure 21, or the sequentially increasing spiral of figure 22 (wherein each jump forms a separate part of the spiral).

Again, such a motion as shown in figures 21 and 22 of the Dunskey '363 patent is merely a jumping motion, each jump corresponding at best to the performing movement and centering step of claim 1 of the present application for example. There is clearly no continuous movement of a second deflection unit to modulate the laser beam to a circular movement, as claimed in claim 1 of the present application.

In an effort to makeup for the deficiencies of the Dunskey '363 patent, the Examiner turns his attention to the Andrews '114 patent. The Andrews '114 patent system does not mention any type of jumping motion as shown in the Dunskey '363 patent, and is thus directed to a completely different type of laser process. The process utilizing the Andrews '114 patent is illustrated in figure 8 of the patent, wherein a type of flying spot scanner with XY deflection mirrors 204 and 208 is used. While the rotation of the mirrors can cause changes in the XY directions, even if its teachings could be combined with the Dunskey '363 (which is not admitted), it still does not teach or suggest continuous movement of a second deflection unit to modulate a laser beam to a circular movement as claimed in claim 1 of the present application.

In fact, **neither the Dunsky '363 patent nor the Andrews '114 patent teach any type of use of both the first deflection unit and the second deflection unit** as claimed in claim 1 of the present application. The second deflection unit is clearly placed in a position preceding the first deflection unit as claimed in claim 1, and allows for continuous movement to modulate a laser beam to a circular movement. As such, no time lags for starting and re-stopping the laser are necessary. Multiple holes can be created as shown in figure 1 of the present application for example, by jumping to new drilling positions and then completing a continuous circular movement once in a particular designated position.

Such use of **both the first and second deflection unit as claimed in claim 1 is not taught or suggested in either of the Dunsky '363 patent and the Andrews '114 patent**, taken either singly or in combination. Even assuming *arguendo* that the references could be combined, they merely would teach two separate types of laser systems, **not a combined system utilizing two deflection units**.

As indicated above, Applicants have amended claim 1 in an effort to clarify distinctions of the claim from the alleged reference combination of the Dunsky '363 patent and the Andrews '114 patent, even assuming *arguendo* that they could be combined. Accordingly, allowance of independent claim 1, as well as dependent claims 2 and 3 is respectfully requested in connection with the present application.

Further, Applicants respectfully submit that the **Examiner has not provided adequate motivation** for combining the teachings of the Andrews

'114 patent with those of the Dunskey '363 patent. Absence such motivation, the Examiner's reference combination is improper.

The Examiner has merely stated that because the Andrews '114 patent and the Dunskey '363 patent are from the same field of endeavor, then the teachings of the Andrews '114 patent **could be** recognized in the inventions of the Dunskey '363 patent. However, this is not **evidence** of motivation, teaching, or suggestion for one of ordinary skill in the art to combine the teachings of the Andrews '114 patent and the Dunskey '363 patent. In order to make a proper combination of references, the Examiner must provide **evidence** as to why one of ordinary skill in the art would have been motivated to select and combine the referenced teachings. Relying on common knowledge or common sense of a person of ordinary skill in the art without any specific hint or suggestion of this in a particular reference is not a proper standard for reaching the conclusion of obviousness. See *In re Sang Lee*, 61 USPQ 2d 1430 (Fed. Cir. 2002).

Somewhat similarly, the Examiner cannot rely on obvious design choice as a reason for combining teachings of the various references. This is again not the proper standard for obviousness. If the Examiner relies on personal knowledge to support a finding of what is known in the art, the Examiner **must provide** an Affidavit or Declaration setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2) and MPEP 2144.03(c). Accordingly, Applicants respectfully require the Examiner to withdraw the rejection or provide an Affidavit or Declaration as set forth above if the rejection is to be maintained.

For only these additional reasons, Applicants respectfully request allowance of claims 1-3 in connection with the present application.

### **ADDITIONAL PRIOR ART REJECTIONS**

The Examiner has made additional prior art rejections over the alleged combination of the Dunskey '363 patent and the Andrews '114 patent, and further in view of additional Japanese patent publications. Applicants respectfully submit that the Examiner has not provided adequate motivation for combining any of these Japanese patent publications with either one or both of the Dunskey '363 patent and the Andrews '114 patent; and further submit that even assuming *arguendo* that the references could be combined, the Japanese patent publications would still fail to makeup for the aforementioned deficiencies of the Dunskey '363 patent and the Andrews '114 patent. Accordingly, even though these rejections do not pertain to claims 1-3, and merely pertain claims which have been cancelled in connection with the present application, the prior art including these references would still fail to remedy the aforementioned deficiencies of claim 1 with regard to the Dunskey '363 patent and the Andrews '114 patent. Accordingly, withdrawal of these rejections is respectfully requested.

### **CONCLUSION**

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of

claims 1-3 in connection with the present application is earnestly solicited.

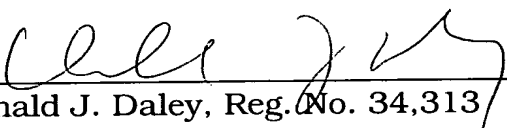
Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicants hereby petition for a three (3) month extension of time for filing a reply to the outstanding Office Action and submit the required \$1020.00 extension fee herewith.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Donald J. Daley at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By   
Donald J. Daley, Reg. No. 34,313

P.O. Box 8910  
Reston, Virginia 20195  
(703) 668-8000

DJD:let